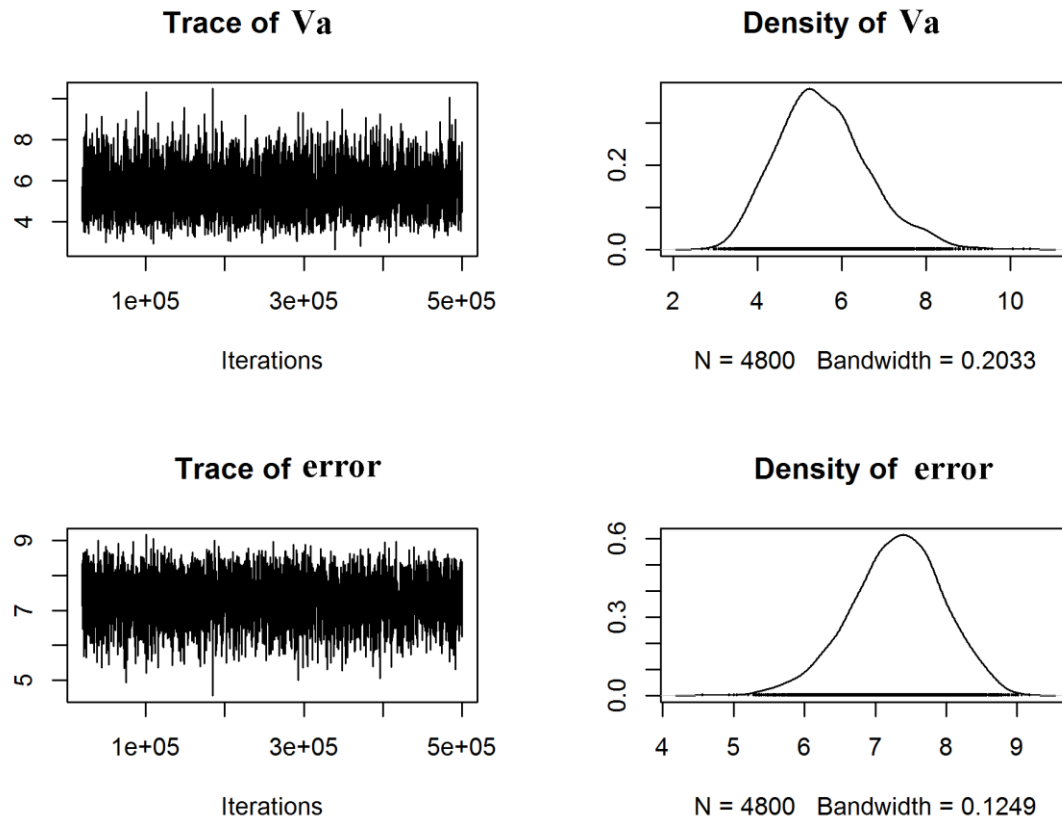
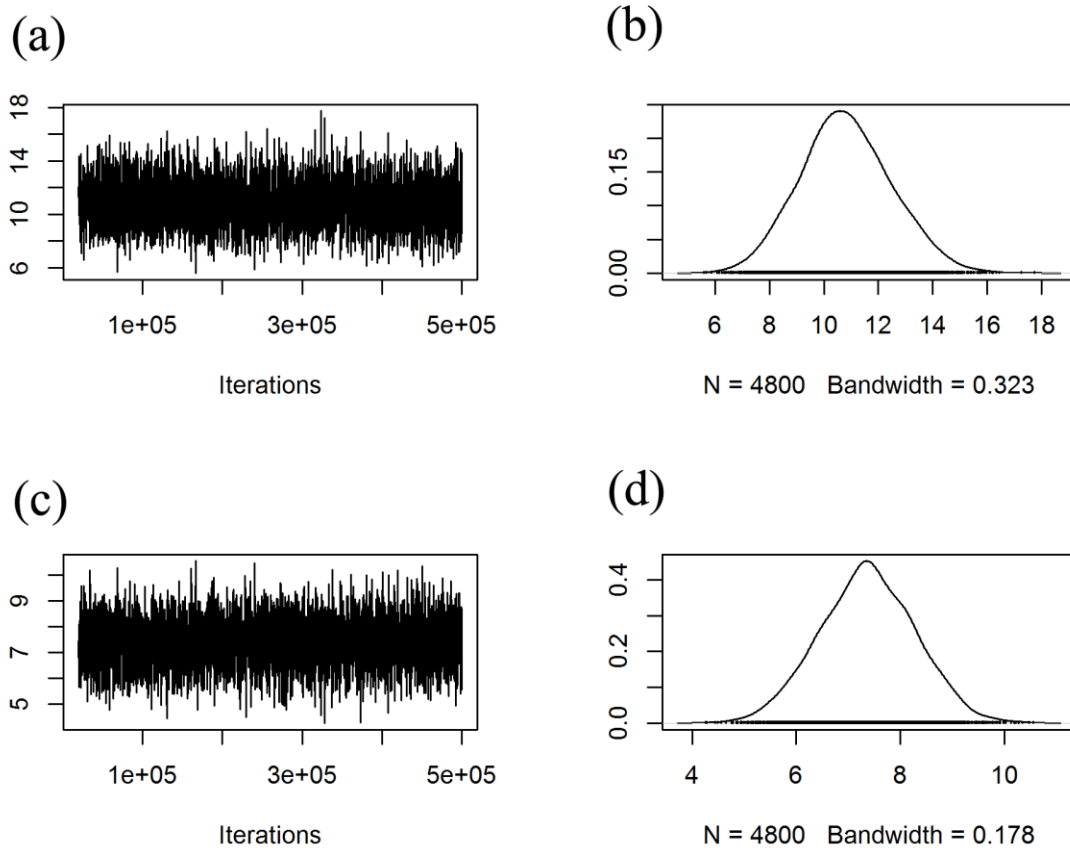


Supplemental materials:



Supplementary Figure S1. MCMC realizations of the variance parameters in a shell redness data. The panels illustrates the trace and probability density plot of the additive (up) and residual(down) variance respectively.

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351 **Supplementary Figure S2.** MCMC realizations of the variance parameters in a shell yellowness data.
 352 The panels illustrates the trace and probability density plot of the additive (up) and residual(down)
 353 variance respectively.

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